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Addressing Suicidal Ideation in the Digital Era: The Influence of Telecounseling Services Among University Students in Indonesia

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A B S T R A C T

Low mental health literacy among university students in Indonesia remains a critical concern, contributing to maladaptive coping mechanisms such as self-diagnosis, self-harm tendencies, and increased suicidal ideation. In the digital era, telecounseling services have emerged as a potential mental health nursing intervention to address these challenges by improving access to psychological support. This study aimed to examine the influence of mental health telecounseling services on suicidal behavior intensity and self-diagnosis tendencies among university students in Indonesia. A quantitative approach was employed involving 174 university students who participated in a telecounseling-based mental health service delivered through a mobile application. Data were collected to assess levels of self-diagnosis behavior, self-harm tendencies, and suicidal behavior, and comparative analyses were conducted between students who accessed telecounseling services and those who did not. The findings demonstrated that students who engaged in telecounseling experienced a significantly greater reduction in suicidal behavior intensity compared to non-users. Similarly, a more pronounced decrease in self-diagnosis behavior was observed among students who accessed telecounseling services. These results indicate that telecounseling plays a meaningful role in mitigating mental health risk behaviors among university students. In conclusion, telecounseling services represent an effective mental health nursing strategy to reduce suicidal ideation and maladaptive self-diagnosis practices, while simultaneously strengthening mental health literacy. This study contributes to the development of accessible, technology-based mental health interventions within higher education settings and supports the integration of telecounseling into campus mental health services

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INTRODUCTION

Mental health problems in college students are a global issue that has become increasingly prominent in the past decade, especially marked by the increasing prevalence of depression, anxiety, and suicidal ideation. The World Health Organization reports that suicide is one of the leading causes of death in young adults, including college students, with an increasing trend post-pandemic globally (World Health Organization, 2021). This condition is exacerbated by low mental health literacy which causes individuals to fail to recognize the early symptoms of psychological disorders properly. This low understanding has an impact on non-adaptive decision-making and delays in seeking professional help (Santana et al., 2021).

In the context of students, low mental health literacy often encourages the emergence of self-diagnosis behaviors that are not based on scientific knowledge. Self-diagnosis risks causing misperceptions of the psychological condition experienced, thereby worsening the mental state and increasing the tendency to self-harm (Furnham & Swami, 2022). International studies show that college students tend to rely on unvalidated online information to understand mental disorders, which ultimately reinforces mistaken beliefs about self-diagnosis. This pattern shows that low mental health literacy is an important risk factor in the formation of maladaptive mental health behaviors.

In Indonesia, students' mental health problems have their own complexities that are influenced by academic pressures, social demands, and developmental transitions to early adulthood. The culture of stigma against mental disorders is still strong, so students often avoid formal mental health services and choose to hide their problems independently. Regional research shows that reluctance to seek psychological help contributes to an increased risk of suicidal ideation in the student population (Auerbach et al., 2020). This phenomenon emphasizes the urgency of developing a mental health intervention strategy that is easily accessible, safe, and in accordance with the characteristics of the younger generation.

The development of digital technology opens up new opportunities in the provision of mental health services, one of which is through telecounseling. Telecounseling allows for remote interaction between healthcare workers and clients, thus overcoming barriers to access, stigma, and resource limitations. A number of international studies report that telecounseling is effective in lowering symptoms of depression and suicidal ideation in the young adult population (Appleton et al., 2021). From a psychiatric nursing perspective, telecounseling acts as a promotive and preventive approach that strengthens mental health literacy and encourages adaptive help-seeking behavior.

Although the effectiveness of telecounseling has been extensively researched, most previous studies have focused on reducing clinical symptoms, such as depression and anxiety, without specifically examining self-diagnosis behaviors as psychosocial risk factors. In addition, research integrating telecounseling with psychiatric nursing approaches in college students in developing countries is still limited (García-Lizana & Muñoz-Mayorga, 2020). This research gap shows the need for an empirical study that examines the effect

of telecounseling on suicidal behavior intensity and self-diagnosis tendencies simultaneously. Thus, this research fills a scientific gap that has not been widely explored in the international literature.

Based on this background, this study aims to identify self-diagnosis behaviors, self-harm tendencies, and suicide risk levels in students in Indonesia. In addition, this study explicitly analyzed the effectiveness of peer-based telecounseling services on reducing the intensity of suicidal behavior and self-diagnosis behavior. This approach is aligned with the need for technology-based mental health interventions that are responsive to student characteristics. Focusing on the local context of Indonesia, this study provides an empirical picture that is relevant for the development of digital-based mental health services.

Theoretically, this research contributes to expanding the understanding of the relationship between mental health literacy, self-diagnosis, and suicidal behavior in the framework of technology-based psychiatric nursing. Practically, the findings of this study can be the basis for the development of mental health services policies and programs in the university environment, especially through the integration of telecounseling in the student service system. The results of this study also support the role of psychiatric nurses in the use of digital technology as a preventive strategy against suicide risk. Thus, this research is expected to be able to have a real impact on improving the quality of students' mental health in the digital era (Zhang et al., 2023).

THEORETICAL REVIEW

Mental Health Literacy and Risk of Suicide Behavior in College Students

Mental health literacy is defined as an individual's ability to appropriately recognize, understand, and manage mental health issues and to know when and how to seek professional help. Low mental health literacy in college students has been identified as a significant factor that increases susceptibility to psychological stress, depression, and suicidal ideation (Kutcher et al., 2020). Students with limited understanding tend to misinterpret psychological symptoms as personal weaknesses, rather than as health conditions that can be treated professionally. This condition increases the risk of delay in intervention and exacerbates the psychological disorders experienced (Wei et al., 2021).

The Phenomenon of Self-Diagnosis and Its Implications for Self-Harm

Self-diagnosis in mental health is becoming a global phenomenon as access to digital information that is not always scientifically validated increases. Individuals, especially college students, often use online media to identify psychological disorders without the assistance of health professionals, which has the potential to lead to misperceptions and excessive fear (López-Cuadrado et al., 2022). International studies show that self-diagnosis behaviors are closely related to increased self-harm tendencies due to misconceptions about the severity of symptoms (Biddle et al., 2021). In the context of psychiatric nursing, this phenomenon confirms the need for educational interventions capable of leading individuals to a more accurate and safe understanding.

Suicidal Ideation as a Manifestation of Student Psychosocial Crisis

Suicidal ideation in college students is often understood as a response to academic pressure, future uncertainty, and interpersonal conflict. Cross-country research reveals that the transition period to early adulthood is a period of vulnerability to identity crises and immature emotional regulation (Duffy et al., 2020). Suicidal ideation does not arise suddenly, but rather through an accumulative process of psychological stress that is not adequately handled. Therefore, early intervention based on psychiatric nursing is crucial to prevent the escalation of suicidal behavior (Hawton et al., 2022).

Telecounseling as an Innovative Digital Mental Health Intervention

Telecounseling as a Digital Mental Health Intervention InnovationTelecounseling is developing as an innovative approach in mental health services that leverages digital communication technology to reach at-risk populations. This model has been proven to be effective in increasing access to services, especially for students who are reluctant to access face-to-face counseling due to stigma or time constraints (Wind et al., 2020). Recent research shows that telecounseling is able to lower the intensity of depressive symptoms and suicidal ideation through a flexible and needs-oriented approach to clients (Poletti et al., 2021). In psychiatric nursing practice, telecounseling expands the role of nurses as facilitators of technology-based psychological support.

Telecounseling and Mental Health Behavior Change

The effectiveness of telecounseling is not only seen in improvements in clinical symptoms, but also in changes in mental health behaviors, including improvements in help-seeking behavior and a decrease in erroneous self-diagnoses. Longitudinal studies show that continuous digital interventions are able to improve students' self-awareness and emotional regulation (Firth et al., 2022). In addition, telecounseling based on supportive relationships, such as the peer confiding approach, strengthens a sense of psychological security that encourages students' openness to the mental problems they experience. This is in line with a psychiatric nursing approach that emphasizes therapeutic relationships as the core of interventions.

Research Gaps in the Context of Developing Countries

Although international evidence supports the effectiveness of telecounseling, research examining the relationship between telecounseling, self-diagnosis, and concurrent suicidal behavior is limited, particularly in developing countries. Most studies focus on the context of developed countries with well-established digital health systems (Naslund et al., 2020). Social, cultural, and service access conditions in developing countries such as Indonesia require a different contextual approach. Therefore, research that integrates the perspective of psychiatric nursing with digital technology becomes highly relevant to fill the global literature gap.

Theoretical and Practical Implications for Psychiatric Nursing

Recent literature confirms that the integration of telecounseling in psychiatric nursing has the potential to strengthen the theoretical framework for technology-based mental health promotion. Telecounseling not only serves as a means of intervention, but also as an educational medium that increases mental health literacy and reduces risky behaviors (Mohr et al., 2021). Practically, these

findings support the development of campus mental health services that are adaptive to the needs of students. Thus, telecounseling is a relevant and sustainable psychiatric nursing strategy in facing mental health challenges in the digital era.

METHODOLOGY

Research Approach and Design

This study uses a quantitative approach with a quasi experimental design with control group design. This design was used to evaluate the effectiveness of mental health telecounseling services against changes in the intensity of suicidal behavior and self-diagnosis behavior in college students through a comparison between the intervention group and the control group. The quasi-experimental approach was chosen because the study conditions did not allow for full randomization of the subjects, but still provided an adequate analytical framework to assess the impact of the intervention comparatively. This design is widely applied in the evaluation of service-based mental health interventions and digital technologies in the student population (Shadish et al., 2020).

Research Population

The population of this study is university students in Indonesia. The research sample amounted to 174 students (n = 174) with an age range of 19–24 years and active student status. The sampling technique uses non-probability sampling with the purposive sampling method, which is adjusted to the research inclusion criteria. The inclusion criteria include active students, having personal devices, being able to access digital applications, and not using narcotics and not experiencing psychotic disorders. The determination of this criterion aims to ensure that participants are in a relatively stable psychological condition so that they are able to participate in the intervention optimally (Torres et al., 2021).

Research Instruments

To ensure the mental health condition of the participants, an initial screening was carried out using the Self Reporting Questionnaire-29 (SRQ-29). This instrument is used to identify symptoms of common mental disorders while also screening for possible psychotic disorders prior to participation in the study. SRQ-29 has been used extensively in community-based mental health research due to its ease of administration and adequate early detection capabilities in young adult populations. The use of screening instruments before interventions is recommended to improve the internal validity of mental health research (van der Westhuizen et al., 2022). Participants who met the screening criteria were then grouped into an intervention group and a control group.

Telecounseling Intervention and Control Group Treatment

The intervention group obtained mental health telecounseling services based on "confiding friends" which were provided through telecounseling applications and can be accessed through the Google Play Store and App Store. These services are designed as a form of psychosocial support that is supportive, reflective, and non-judgmental with a psychiatric nursing approach that emphasizes therapeutic relationships. In contrast, the control group received conventional mental health education through print media, without access to

telecounseling services. This difference in treatment aims to compare the effectiveness of interactive digital interventions with conventional educational approaches commonly applied in educational settings (Hilty et al., 2021).

Research Data Collection and Analysis

Data collection was carried out using a structured questionnaire that measured three main variables, namely self-diagnosis behavior, self-harm tendency, and suicidal behavior intensity. Measurements were taken after the implementation of interventions in both research groups. The data obtained were analyzed descriptively and comparatively to assess the difference in changes between groups. Data analysis was carried out using statistical software with a significance level of 0.05, in accordance with the research objectives to assess the effectiveness of telecounseling services as a digital-based psychiatric nursing intervention (Bucci et al., 2020).

RESEARCH RESULTS AND DISCUSSION

Self-Diagnosis Behavior Profiles in College Students

Students show a tendency to do self-diagnosis through several repetitive behavior patterns, especially related to independent mental health information search and symptom matching. The four prominent patterns are searching for information through social media, searching through health websites, matching symptoms, and believing in the suitability of symptoms with certain disorders. In both groups (intervention and control), the pattern matching symptoms emerged as the most dominant behavior, showing that students tend to assess their psychological condition based on subjective perceptions reinforced by digital information.

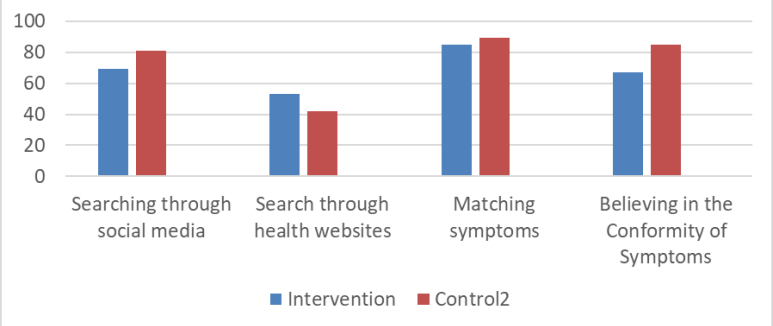

Figure 1. Self-Diagnosis Behaviors Among University Students (n = 174)

Based on Figure 1, self-diagnosis behavior in students is not only in the form of searching for information, but also entering a stronger cognitive stage, namely matching symptoms and Believing in the appropriateness of symptoms. This pattern is important because it shows that students are not just "finding out", but have the potential to build diagnosis confidence without professional judgment. This condition is consistent with the background of research in PPT that low mental health literacy can make individuals less ready to make decisions and reluctant to seek psychological help, so self-diagnosis is the chosen path.

Self-Harm Behavior Profile in Students

Descriptive results show a variation in shape self-harm reported by the students. The most dominant form is the act of self-harm with a relatively "easy to do" pattern and can be hidden, followed by other forms that also reflect physical self-harm behavior. This distribution confirms that self-harm behavior in college students is not singular, but appears in various manifestations that have the potential to be related to psychological distress.

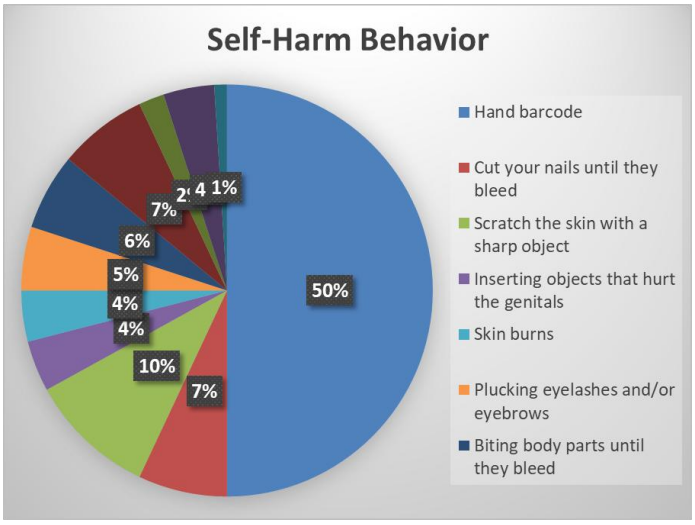

Figure 2. Types of Self-Harm Reported by University Students (n = 174)

Based on Figure 2, the most common forms of self-harm are "barcode" on the hand (50 reports), far exceeding any other form. This pattern suggests that self-harm behavior in college students can emerge as a maladaptive coping expression, especially when individuals do not have effective emotion regulation strategies or do not access professional help. These results reinforce the urgency of accessible and student-acceptable mental health interventions, as offered through telecounseling in this study.

Suicidal Behavior Tendencies of Students

The tendency of suicidal behavior in college students is shown through three main indicators: Suicidal cues, suicide threats, and suicidal behaviors. The results showed that the signal and threat indicators appeared higher than the behavioral indicators. These findings indicate that in many college students, suicidal tendencies appear to be more dominant as warning signs, which are clinically important as opportunities for early intervention before they develop into action.

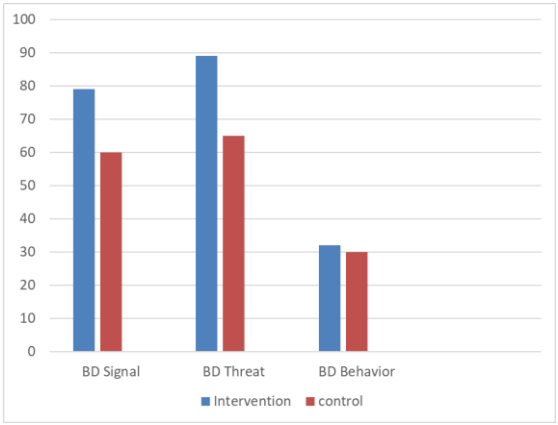

Figure 3. Suicidal Behavior Tendency Indicators (n = 174)

Figure 3 shows that the number Suicide Threats is the highest indicator in both groups, while Suicidal Behavior is at a lower level. This pattern is relevant to the discussion in the PPT which places student suicide risk behavior as a form of crying for help, so that signals and threats can be understood as expressions of distress that require an immediate response. Thus, these results confirm the importance of services that are able to respond quickly, are easy to reach, and do not add to the stigma barrier.

The Effect of Telecounseling on the Intensity of Suicidal Behavior

Comparative analysis shows that Intervention group (telecounseling) experience greater decrease in the intensity of suicidal tendencies compared to the control group. In the pre-intervention measurements, the average of the two groups was relatively close to each other, then after the intervention there was a sharp decrease in the intervention group. These results corroborate the core statement in the PPT that the decrease in the intensity of suicidal behavior was greater in students who accessed telecounseling than those who did not.

Table 1. Effect of Telecounseling on Suicidal Behavior Intensity (n = 174)

Variable	Group	Time	n	Mean	SD	Mean Difference	pValue
Suicidal Tendency (Baseline)	Intervention	–	87	14.05	0.987	0.20	1.007
	Control	–	87	13.85	1.001	–	–
Suicidal Tendency (Pre–Post Change)	Intervention	Pre	87	14.05	0.987	13.00	0.001
		Post	87	1.05	0.137	–	–
	Control	Pre	87	13.85	1.001	11.85	0.001
		Post	87	2.00	0.500	–	–
Suicidal Tendency (Post-Intervention)	Intervention	–	87	1.05	–	0.95	0.000

Variable	Group	Time	n	Mean	SD	Mean Difference	pValue
	Control	–	87	2.00	–	–	–

Substantively, Table 1 shows two main messages that are consistent with the abstract: (1) there was a decrease in intensity scores in both groups, but (2) there was a greater decrease in the telecounseling group, indicated by the difference between a higher pre-post average and a lower post-post average compared to controls. In other words, "confidant" based telecounseling serves as a more powerful intervention than print education in reducing the intensity of suicidal tendencies. This pattern is in line with the psychiatric nursing framework that emphasizes psychosocial support and connectedness as protective factors against suicide risk.

The Influence of Telecounseling on Self-Diagnosis Behavior

The results also show that Self-diagnosis behavior decreased more in the intervention group compared to the control group. This means that telecounseling is not only related to a decrease in suicide indicators, but also has an impact on cognitive-risky behaviors, namely the tendency to assess and establish self-diagnosis in an undirected manner. This supports the conclusion in the abstract that telecounseling plays a role in suppressing maladaptive self-diagnosis practices, while strengthening mental health literacy.

Table 2. Effect of Telecounseling on Self-Diagnosis Behavior (n = 174)

Variable	Group	Time	n	Mean	SD	Mean Difference	pValue
Self-Diagnosis Behavior (Baseline)	Intervention	–	87	14.23	0.171	5.18	0.101
	Control	–	87	9.05	0.901	–	–
Self-Diagnosis Behavior (Pre–Post Change)	Intervention	Pre	87	14.23	0.171	13.03	0.000
		Post	87	1.20	0.067	–	–
	Control	Pre	87	9.05	0.901	8.25	0.010
		Post	87	0.80	0.080	–	–
Self-Diagnosis Behavior (Post-Intervention)	Intervention	–	87	1.20	0.123	0.40	0.001
	Control	–	87	0.80	0.086	–	–

Based on Table 2, both groups experienced a decrease in scores from pre to post, but the magnitude of the decrease in the intervention group is greater (Mean Difference pre–post = 13.03) compared to control (8.25). These findings are in line with the PPT narrative that students who accessed telecounseling showed a greater change in self-diagnosis behavior than students who did not participate in telecounseling. Interpretively, telecounseling allows students to obtain psychological clarification and support that reduces the need to establish one's own diagnosis through undirected digital searches. As a result, potentially harmful self-diagnosis behaviors can be suppressed through services that are more responsive than print education alone.

DISCUSSION

The results of this study show that students have a relatively high level of self-diagnosis behavior, especially in the aspects of independent mental health information retrieval and symptom matching. These findings indicate that students tend to build an understanding of their psychological condition based on subjective perceptions and digital information that is not necessarily clinically valid. This phenomenon can be understood within the framework of mental health literacy theory, which states that low mental health literacy encourages individuals to use informal sources as the main reference (Jorm, 2020). In the context of the developmental transition to early adulthood, students are in the phase of formation of unstable self-concepts, so they are vulnerable to misinterpretation of their emotional experiences. Thus, the high self-diagnosis in students reflects the urgent need for structured educational and supportive interventions.

Findings related to self-harm behavior show that students show a variety of forms of self-harm, with the dominance of behavior that is hidden and easy to do. This pattern is in line with the understanding that self-harm is often used as a coping mechanism to manage negative emotions that are not handled adaptively. From the perspective of psychosocial development, this behavior can be understood as an expression of emotional distress that is not channeled through adequate social support (Arnett, 2021). Academic pressure, bullying, family conflicts, and economic problems are contextual factors that often contribute to the emergence of these behaviors in students. Therefore, these results confirm that self-harm in students is not just an individual behavior, but a reflection of the complexity of the psychosocial factors that surround it.

The tendency of suicidal behavior to appear more in the form of cues and threats than actual action indicates that students are in the crying for help phase, as described in the literature on the sociology of mental health. In this phase, individuals are not yet fully suicidal, but express the need for help through verbal and nonverbal signals (Stanley & Brown, 2021). National data showing that 4.2% of students have thought about suicide and 6.9% of students have suicidal intent corroborate the finding that this group is in a state of significant vulnerability (World Health Organization, 2021). Thus, suicidal cues and threats must be understood as opportunities for early intervention, not just attention-seeking

behavior. A responsive and empathetic approach to psychiatric nursing is crucial to prevent risk escalation at this stage.

The results showed that students who accessed telecounseling services experienced a greater decrease in the intensity of suicidal behavior than students who only received conventional mental health education. These findings reinforce the concept that supportive relationship-based interventions have a significant impact on the regulation of emotions and individual self-perception. Telecounseling provides a safe space for students to express distress without fear of stigma, thus allowing for a more adaptive process of emotional and cognitive clarification (Rauschenberg et al., 2021). Within the framework of psychiatric nursing, the therapeutic relationships built through telecounseling act as a protective factor against suicidal impulses. Therefore, telecounseling can be seen as an effective intervention strategy in the context of mental emergencies in students.

In addition to reducing the intensity of suicidal behavior, telecounseling has also been shown to be more effective in reducing self-diagnosis behavior than print media education. These findings show that reflective two-way interactions are more able to correct misconceptions than one-way information delivery. Conventional education tends to increase knowledge, but it does not necessarily change the beliefs and mindsets that have been formed. In contrast, telecounseling allows students to obtain direct feedback and emotional validation that helps build self-understanding more realistically (Bäuerle et al., 2020). Thus, these results contribute to the development of a model of psychiatric nursing interventions that are not only informative, but also transformative in shaping mental health behaviors.

Although it provides meaningful findings, this study has some limitations that need to be critically examined. A quasi-experimental design without full randomization opens up the possibility of confounding factors influencing outcomes, such as an individual's motivation to participate in telecounseling services. In addition, self-report questionnaire-based measurements have the potential to be influenced by social biases and subjective perceptions of respondents. Therefore, further research is recommended to use longitudinal design with stronger randomization and combine quantitative and qualitative methods. Further research also needs to explore more deeply the factors of suicidal impulses and the role of peer groups as peer support integrated with telecounseling services. Practically, the results of this study support the need for a more massive mental health campaign, strengthening the role of the campus in creating a healthy academic atmosphere, and the development of continuous counseling services from the beginning to the end of the student study period.

CONCLUSIONS AND RECOMMENDATIONS

This study concludes that digital-based mental health telecounseling services play a significant role in reducing the intensity of suicidal behavior and self-diagnosis behavior in students in Indonesia. Students who accessed telecounseling showed a greater reduced risk of mental health behaviors than those who only received conventional mental health education, confirming the

advantages of interactive and supportive approaches in the context of psychiatric nursing. These findings indicate that telecounseling not only serves as a means of psychological support, but also as an effective strategy to strengthen mental health literacy and correct maladaptive cognitive behavior. Thus, the integration of telecounseling in college mental health services is a strategic step in responding to students' vulnerability to suicidal ideation in the digital age, while contributing to the development of accessible, responsive, and sustainable psychiatric nursing interventions.

FURTHER STUDY

Future studies are recommended to employ longitudinal and fully randomized controlled designs to examine the long-term effectiveness of telecounseling in reducing suicidal behavior and self-diagnosis among university students. Further research should also explore the mediating roles of mental health literacy, emotional regulation, and peer support in enhancing the outcomes of telecounseling interventions. In addition, qualitative investigations are needed to capture students lived experiences and perceptions of telecounseling, particularly regarding therapeutic relationships and stigma reduction. Expanding the scope of research across diverse institutional and cultural contexts will strengthen the generalizability of findings and support the development of more comprehensive and sustainable psychiatric nursing interventions in higher education settings.

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